REMARKS

Claims 9-23 were rejected under 35 U.S.C.§102(b) as being anticipated by Hirota et al.(Hirota).

Reconsideration is requested.

The glass disclosed by Hirota contains 5 - 12wt.% of Li_2O for lowering the sag point without causing the chemical durability to deteriorate (col. 5, line 38). The amount of Li_2O in Example 10 of the Hirota patent is 7.3wt.%. In contrast, the glass of the present invention may include 0-3mass% of Li_2O in order to enhance the melting properties.

The amended claims point out a glass having the property of having a very small variation in the refractive index which is caused by the compaction phenomenon. For these reasons, the amended claims are not anticipated by Hirota and withdrawal of this ground of rejection is requested.

Claims 9-38 were rejected under 35 U.S.C.§102(b) as being anticipated by Danielson et al. (Danielson)

The Danielson patent discloses a glass composition having 5.6 - 11% of Al_2O_3 in the specification and 4 - 8% in the claims. In col. 2, lines 4-8 of Danielson, it was disclosed that increased fluoride release is observed in glasses with a lower Al_2O_3 content and therefore, the glasses will contain no more than about 8wt% of Al_2O_3. The amended claims of the present application point out that the Al_2O_3 content is a maximum of 2.3 mass % as disclosed in Example 25 which clearly distinguishes the claimed invention from the Danielson patent. The Al_2O_3 is added to the glass composition to improve the chemical durability and to adjust the viscosity of the glass and the refractive index. A Table is attached which shows the relationship between the weight % of Danielson and the conversion to mass % in order to allow a comparison of the Danielson patent with the claims of the present application. For these reasons, the amended claims of the present application are clearly distinguishable from the Danielson patent and it is requested that this ground of rejection be withdrawn.

Claims 9-11, 14-156, 19-21, 24-26 and 34-36 were rejected under 35 U.S.C.§102(b) as being anticipated by Kasori et al. (Kasori).

Reconsideration is requested.

Kasori discloses a optical fiber for optical communication. The patentee disclosed a composition for a glass fiber core and a composition for a glass fiber clad layer. In the core glass composition, 3 - 7wt.% of Al_2O_3 added to inhibit devitrification and improve water resistance. If the level of Al_2O_3 is lower than 3wt.%, no improvement in water resistance can be recognized and the glass is subject to devitrification. The composition of the glass fiber clad layer Al_2O_3 is added in an amount of 4 - 7wt%. At col. 3, lines 65- col. 4, line 1, the patentee teaches that the Al_2O_3 has no effect at a level of less than 4wt.%. For this reason, there is no motivation in Kasori to use less than 4wt.% of Al_2O_3. Kasori discloses samples 1, 2, 9, 26,

and 27 as having Al_2O_3 at a level of less than 2.3wt% but these samples all contain CaO at a level of 3.55wt% which are excluded from the amended claims of the present application which specify a maximum of no more than 2wt.% of CaO. For these reasons, the amended claims of the present application are not anticipated by Kasori and it is requested that this ground of rejection be withdrawn.

Claims 9-38 were rejected under 35 U.S.C.§102(b) as being anticipated by Faulstich.

Reconsideration is requested.

The Faulstich patent discloses an optical glass having an nd of $1.650\pm2X10^{-3}$ and vd of 55.5±1.0 which contains SiO_2 in an amount ranging from 32.5 - 33.5wt%. This patent does not disclose why the amount of the SiO_2 is limited. The amended claims of the present application point out that the amount of the SiO_2 is from 55.35 to 70mass%. The lower limit of 55.35mass% is based on Example 27 In addition, the glasses of all of the Examples of the present invention have an nd of 1.6056 or below and a vd of 58.7 which are outside of the ranges of the optical constants of Faulstich. The Faulstich patent does not disclose or suggest the composition and properties of the glass that is defined by the amended claims of the present application. For these reasons, it is requested that this ground of rejection be withdrawn.

The specification has been amended to delete Examples 28-30, 34, 35 and 38.

An early and favorable action is earnestly solicited.

Respectfully submitted,

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Danielson

conversion of examples

(weight %)

	15	16	17	18	19	20	21	22	23	29	30	31
SiO2	49.100	51.700	45.900	49.300	43.600	55.900	49.700	53.300	47.300	48.600	50.300	52.200
Al2O3	8.300	11.000	10.500	10.800	10.300	6.100	5.800	6.000	5.700	8.100	8.400	8.700
AlF3												
B2O3	8.400	6.800	6.500	10.100	9.600	7.000	6.600	10.300	9.800	8.400	8.700	9.000
BaO	4.300		8.300		8.200		8.500		8.300			
BaF2	29.900	30.500	28.900	29.900	28.400	31.100	29.500	30.500	28.900	64.900	27.400	19.300
SrO												
ZnF2											5.200	10.700
total	100.000	100.000	100.100	100.100	100.100	100.100	100.100	100.100	100.000	130.000	100.000	99.900

mass%

		15	16	17	18	19	20	21	22	23	29	30	31
60.08	SiO2	47.796	50.300	44.677	47.944	42.457	54.304	48.350	51.806	46.085	35.756	48.691	50.524
101.96	Al2O3	8.080	10.702	10.220	10.503	10.030	5.926	5.642	5.832	5.554	5.959	8.131	8.421
69.62	B2O3	8.177	6.616	6.327	9.822	9.348	6.800	6.421	10.011	9.548	6.180	8.422	8.711
153.33	BaO	29.640	25.951	32.679	25.429	32.171	26.422	33.367	25.926	32.711	41.757	23.196	16.337
103.62	SrO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
81.39	ZnO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.963	8.153
19.00	F	6.308	6.431	6.096	6.302	5.994	6.548	6.220	6.425	6.102	10.348	7.598	7.855
	total	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

(weight %)

	32	33	34	35	36	37	38	39	40	41	42	43
SiO2	54.200	56.700	46.700	49.300	52.200	55.400	47.400	47.400	47.400	46.900	46.900	46.900
Al2O3	9.100	9.500	5.600	5.900	6.200	6.600	8.000	8.000	8.000			
AlF3										13.600	13.600	13.600
B2O3	9.300	9.800	9.700	10.300	10.900	11.500	8.100	8.100	8.100	8.000	8.000	8.000
BaO										29.000	29.000	29.000
BaF2	10.600		37.900	26.800	14.000		33.600	33.600	33.600			
SrO												
ZnF2	16.700	24.100		7.800	16.700	26.500						
total	99.900	100.100	99.900	100.100	100.000	100.000	97.100	97.100	97.100	97.500	97.500	97.500

mass%

		32	33	34	35	36	37	38	39	40	41	42	43
60.08	SiO2	52.392	54.609	45.182	47.517	50.259	53.218	47.321	47.321	47.321	46.259	46.259	46.259
101.96	Al2O3	8.796	9.150	5.418	5.687	5.969	6.340	7.987	7.987	7.987	8.143	8.143	8.143
69.62	B2O3	8.990	9.439	9.385	9.927	10.495	11.047	8.087	8.087	8.087	7.891	7.891	7.891
153.33	BaO	8.961	0.000	32.068	22.590	11.788	0.000	29.336	29.336	29.336	28.603	28.603	28.603
103.62	SrO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
81.39	ZnO	12.708	18.273	0.000	5.918	12.658	20.040	0.000	0.000	0.000	0.000	0.000	0.000
19.00	F	8.153	8.531	7.947	8.361	8.831	9.356	7.270	7.270	7.270	9.104	9.104	9.104
	total	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000